

SECTION 02721

CULVERTS

PART 1 GENERAL

1.01 SCOPE

- A. This Section includes culverts and related appurtenances and installation.

1.02 RELATED SECTIONS AND PLANS

- A. Section 02100 - Surveying
- B. Section 02215 - Trenching and Backfilling
- C. Section 02270 - Erosion and Sediment Control
- D. Section 13000 - Borrow Area Management
- E. Part 8 - Environmental Health and Safety, and Training Requirements

1.03 REFERENCES

- A. Latest version of American Association of State Highway Transportation Officials (AASHTO) Standards.
 - 1. AASHTO M 36. Standard Specification for Corrugated Steel Pipe, Metallic-Coated, for Sewers and Drains.
 - 2. AASHTO M 170. Standard Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe.
 - 3. AASHTO M 198. Standard Specification for Joints for Circular Concrete Sewer and Culvert Pipe Using Flexible Watertight Gaskets.
- B. Latest version of the State of Ohio Department of Transportation Construction and Material Specifications (Ohio DOT Specifications).

1.04 SUBMITTALS

- A. Submit the following to the Construction Manager for review within 30 calendar days from Notice to Proceed for review:
 - 1. culvert Manufacturer's product data and recommended methods of storage, handling, and proposed installation;
 - 2. shop drawings showing the layout and details of joints, special connections, and fittings; and
 - 3. culvert Manufacturer's written certification that culverts and joint material meet the material requirements of this Section.

1.01 HEALTH AND SAFETY REQUIREMENTS

- A. Environmental, health and safety, and other training requirements shall be as specified in Part 8 of the Contract Documents.

PART 2 PRODUCTS

2.02 GENERAL

- A. Furnish reinforced concrete pipe (RCP) circular or box culverts and corrugated metal pipe (CMP) culverts meeting requirements of Ohio DOT Specifications for the intended application.

2.03 RCP CIRCULAR CULVERTS

- A. Furnish RCP circular culverts meeting the requirements of AASHTO M 170 for Class IV Reinforced Concrete Pipe with Wall B.

2.04 CMP CULVERTS

- A. Furnish CMP culverts meeting the requirements of AASHTO M 36 with minimum 0.064-inch thick sheets and corrugations of 2.67 inches by 0.50 inches.

2.05 JOINTS

- A. Furnish RCP circular joints with Type A culvert gaskets meeting the requirements of AASHTO M 198.
- B. Furnish CMP culvert joints with coupling bands and rubber O-ring gaskets meeting the requirements of AASHTO M 36. Use coupling bands fabricated from the same type of base metal coating as the CMP culverts.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install culverts as required for borrow area management in accordance with Section 13000 or for erosion and sediment control in accordance with Section 02270.
- B. Examine culverts and joint materials before installation for workmanship. Do not install any culvert or joint material which shows poor workmanship.
- C. Prior to culvert installation, complete trench excavation and install embedment fill in accordance with the requirements of Section 02215 unless otherwise shown on the Construction Drawings.
- D. Install RCP circular and box and CMP culverts to the lines and grades shown on the Construction Drawings, to the survey tolerances specified in this Section.
- E. Install joints for RCP and CMP culverts in accordance with the Manufacturer's recommendations.
- F. After placement of the culverts, perform backfilling as specified in Section 02215.

3.02 SURVEY CONTROL

- A. Survey the final locations and invert elevations of the culverts in accordance with Section 02100.

3.03 TOLERANCE

- A. Construct culverts to within ± 0.1 feet of the invert elevations indicated on the Construction Drawings and to provide positive drainage at all times.

[END OF SECTION]